

PA

IP Public Address System

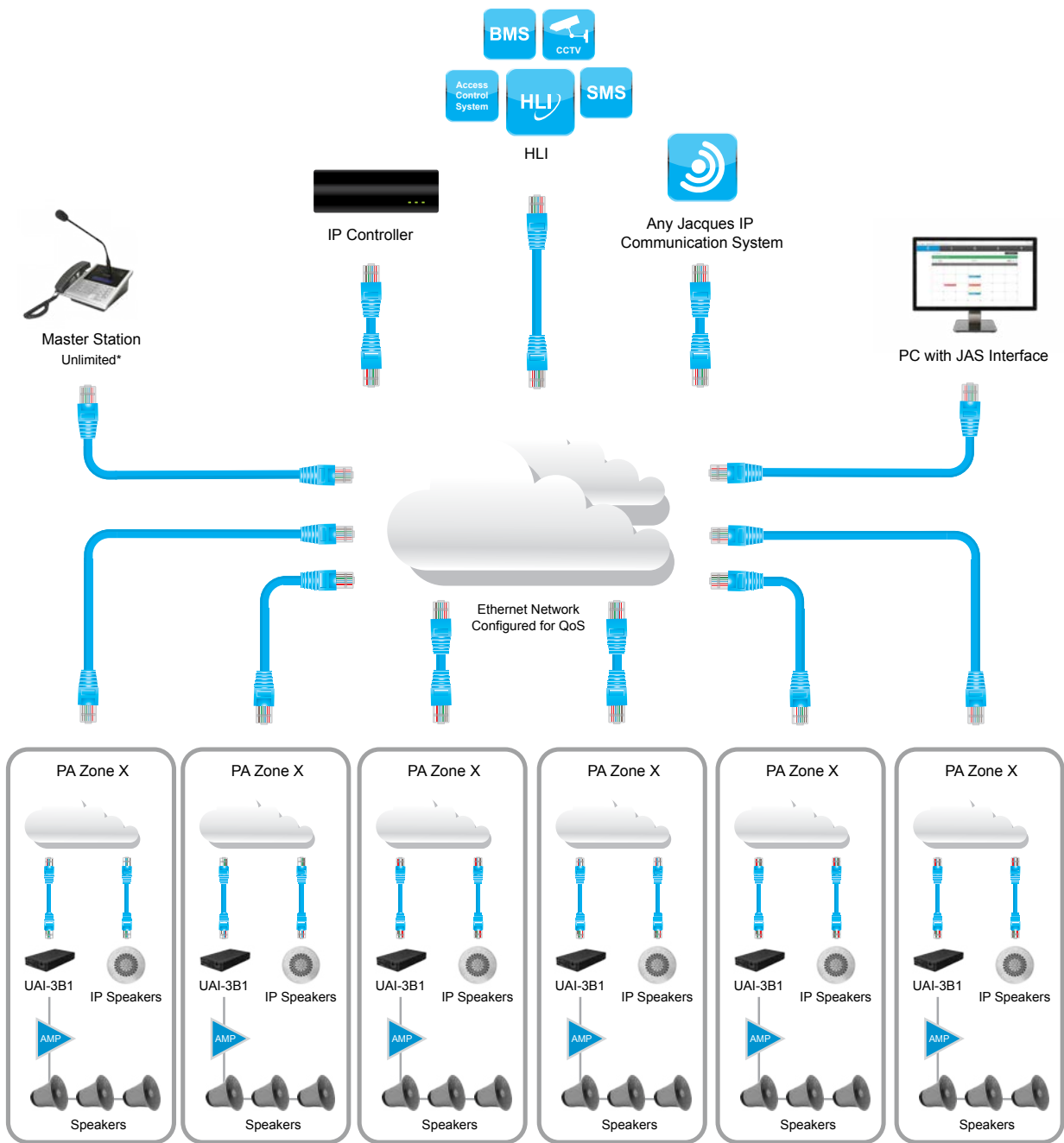
Brochure

IP PUBLIC ADDRESS SYSTEM

In the wake of recent tragedies public safety has become a major concern for both governments and businesses. People visit, gather or transit through public spaces worldwide, every day. Jacques IP PA system offers exceptional reliability, scalability and configuration options ensuring it can adapt to suit any installation.

Operating via an IP network allows for complete flexibility of system use, including dynamic grouping of PA zones, with no limit on the number of groups or the number of zones within a group. This allows operators the ability to design site-specific PA systems ensuring total audio coverage across all buildings, areas and/or precincts.

IPPUBLICADDRESSSYSTEMDIAGRAM



Public Address Zones
Unlimited*

*Virtually unlimited. Dependent on server configuration and network bandwidth.



The Jacques IP Public Address system has been designed for use across various market applications that require communication with the masses.

SYSTEM SUMMARY

Organisations responsible for public safety, need trouble-free mass communication options providing message distribution to large and busy crowds in the case of an emergency – fire, accident, riot. Jacques IP PA system with its flexibility to expand to an unlimited number of PA zones ensures the management of public safety announcements is effortless. The system has the added ability to monitor and interrogate the system for faults via the network. If a PA zone controller on the network fails, the system will report the failure allowing for timely maintenance and repair. Importantly, the integrity of the entire PA system is not affected allowing for broadcasts to continue to all other zones on the network, ensuring ultimate public safety.

SYSTEM FEATURES



ANNOUNCEMENTS & TONES

Live announcements can be made across the system straight from the PA console or PC Master Station while scheduled announcements, tones and bells can be created, organised and scheduled across days, weeks and months quickly and easily.



SYSTEM MONITORING

Ability to monitor and interrogate the system for faults via the network. If a PA controller on the network fails, the system will report the failure allowing for timely maintenance and repair. Importantly, the integrity of the entire PA system is not affected allowing for broadcasts to continue to all other zones on the network.



DIGITAL SIGNAL PROCESSOR

The use of a digital signal processor allows total user control of the PA system. Users have the flexibility to broadcast background music to any number of selected PA zones, while making an audio announcement to other individual or selected zones simultaneously. Multiple simultaneous streams of background music can be distributed throughout the system at each zone.



FLEXIBLE SYSTEM ARCHITECTURE

Create small, large or multi-site PA systems. Our system allows for virtually an unlimited number of public address endpoints to be connected, integrated and managed. If a site expands additional PA zones can easily be added to new or existing network infrastructure, ensuring system longevity.



UNLIMITED MULTI ZONE

Features dynamic grouping of PA zones, with no limit on the number of groups or the number of zones within a group ensuring complete system scalability.



AMBIENT NOISE SENSORS

Optional ambient noise sensing microphones provide Automatic Level Control (ALC) across the system.



TRUE IP DIGITAL TECHNOLOGY

Jacques systems are based on Ethernet network standards and TCP/IP protocols, which use commercially available network equipment and infrastructure.



3RD PARTY INTEGRATION

Seamless 3rd party integration to leading building & security management, CCTV, access control and telephony systems. Integration to SIP enabled digital telephone systems allows users to make live announcements across the PA system from their telephone.

Create time-scheduled announcements to broadcast across your site. Simple management via calendar view.

SAFE CITIES – INTEGRATING PA, INTERCOM & CCTV

City Councils operate programs aimed at ensuring public safety in a city's public spaces and limiting crime. Councils often operate a central monitoring facility 7 days a week, 24 hours a day observing and interacting with hundreds of CCTV cameras across the city. Working seamlessly alongside these CCTV systems is the Jacques IP Communication System featuring public address, intercom and help point units allowing for security officers at central control to verbally communicate with an individual or the masses while viewing live camera footage.

Malls are some of a city's busiest public venues, attracting diverse crowds day and night, 7 days a week. With millions of people visiting malls every year, steps can be taken to further enhance the safety of individuals and the security of property. A Jacques Public Address system aims to provide immediate information dissemination to the public in order to ensure a quick response time to any situation from security personnel at central control.

Key features of this system include the ability to make live public address announcements and to broadcast pre-recorded and time scheduled announcements to one, selected or all public address zones across the sites. The public address system which can operate across multiple locations utilising the same network can be managed centrally, enabling security to engage with persons in all or selected locations.

Integration of the public address system with a CCTV system allows verbal warnings to be broadcast to potential troublemakers that the police have or will be called. The system ensures persons are aware 'someone is watching' and may deter troublemakers from further action. A series of pre-recorded messages initiated by an operator using the PC Master Station User Interface, in conjunction with associated camera footage can broadcast public service and warning announcements easily.



CUSTOMISED GRAPHICAL USER INTERFACE

The Jacques GUI can be completely customised to suit your application:

- Upload multiple site maps, including submaps
- Load audio files, warning tones or announcement files for broadcast across the PA system
- Use your city or company branding and logo



SAFE TRANSIT

During peak hour, a cities transport network (bus, rail or ferry) feature high volumes of people transiting in or out of the city. In order for transport networks to run smoothly, communication is critical. Jacques IP Public Address system ensures communication to those within the transport network is available to all and received with clarity.

Transport PA systems can feature:

- Jacques Help Point Units located on platforms and in transit car parks. Help points can be connected to several operation centres and can be diverted when any of these centres are closed.
- Jacques Public Address System allows for announcements or emergency messages to be broadcast across the system. Public address messages can be live or pre-recorded and time scheduled with the flexibility to broadcast to one, selected or all public address zones across the network.

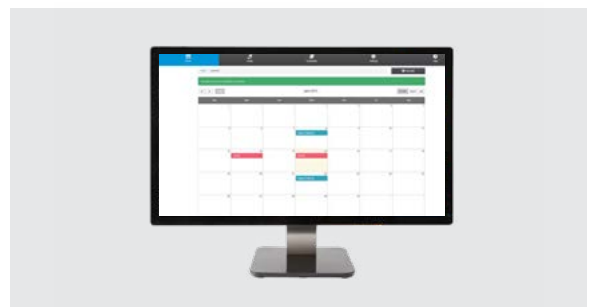
- Jacques lift intercom devices within station lifts allow for calling to the operation centre in case of an in-lift emergency.
- 24 hour monitored CCTV security cameras located throughout a transport network allow for security personnel at the operations centre to switch to an intercom-associated-camera ensuring complete audio and video monitoring.

A transport intercom, PA and Help Point Unit system can be managed at central control by a customised Graphical User Interface (GUI). The GUI features multiple station maps and sub maps, and pre-recorded message buttons allowing operators to make, answer and terminate intercom and PA calls.


ANNOUNCEMENT SCHEDULING

Jacques Announcement Scheduler (JAS) software allows sites to:

- Facilitate pre-recorded PA announcements, bells, tones & warning alarms across a Jacques IP PA system
- Allows for the uploading of audio files for broadcast
- Build timetables of announcements, bells & tones for broadcast at allocated times to select or all PA zones
- Apply schedules to days, weeks or months according to a sites broadcast requirements
- Management of the scheduler via a user-friendly calendar view



INTRODUCTION TO JAS
WATCH VIDEO



Build your IP public
address system following
these simple steps



IP PA SYSTEM

Begin with an Ethernet Network
configured for QoS.

1

CONTROLLER PACKAGE

Choose a controller package which can
manage your system size and offer the
functionality you require.

Gold | Silver

2

MASTER STATION

Choose your master station. They can make
and receive intercom calls and make
public address announcements.

IPM-360 | PCC-650MX

3

PA FUNCTIONALITY

Choose your Public Address components to
achieve the required functionality.

UAI-3B1 | Amplifiers | Speakers

4

INTERCOM TERMINALS

Add intercom terminals. They call pre-defined
master stations and can initiate relays within
your system.

VSL-35X | HPU-5E

+

OPTIONAL EXTRAS

Customisation of Graphical User Interfaces (GUI)
and/or
Integration with CCTV & Access Control Systems

1

CONTROLLERS & SOFTWARE



SYSTEM CONTROLLER MEDIUM

TCH-2MXH | 51660

- IP controller, up to 80 endpoints
- Available to administer most Jacques system software modules & interfaces
- Facilitates almost all core functions of the Jacques IP Communication System
- Supports high definition audio
- Fanless and low power consumption
- SATA hard drive



SYSTEM CONTROLLER LARGE

JSC-5L | 51814, JSC-5L-AEC | 51815

- IP controller, large, includes JCCP server software for intercom devices to make and receive calls, more than 80 endpoints supported
- Supports high definition audio
- SATA hard drive
- Segregated air-flow design for optimal unit cooling
- Acoustic Echo Cancellation Software (JSC-5L-AEC only)

SOFTWARE

Software modules* manage key functionality of the system and can provide additional functionality. Choose software packages to achieve system functionality requirements.



DAR

Echo cancellation for full duplex communication
Interface call audio to third party recording devices (digital, SIP or analogue)
Stream background music/entertainment through intercom devices & PA speakers



SIP GATEWAY

Intermediate interface allowing for integration of Jacques system with compatible SIP systems & devices
Implements RFC 3261-Core Session Initiation Protocol to transfer, convert & filter communication
Support for bridge calling allowing a Jacques device to dial multiple SIP devices however only allowing one to answer and perform a call



EVENT CONTROLLER

Provides simplified interfaces for the integration of external systems & products
Feature highly configurable rules to match system events, simultaneous event triggers, alarms & offline events
Standard handling of CCTV function



JAS

Facilitate pre-recorded PA announcements, tones & warning alarms across a Jacques IP PA system
Allows for the uploading of audio files for broadcast
Built timetables of announcements, bells & tones for broadcast at allocated times to select or all PA zones
Apply schedules to days, weeks or months according to a sites broadcast requirements

2

MASTER STATIONS



PC MASTER STATION

PCC-650WIN | 51791, PCC-650WTS | 51857

- Complete intercom call handling functions
- Complete public address functionality
 - Make live and pre-recorded announcements
 - Broadcast tones, bells & alarms
 - Visual display of PA zones (unlimited number of zones depending on controller)
 - Selection and playback of recorded announcements
- Diagnostics and reporting
 - Alarm notifications including device state
- Touchscreen compatible interface
- Map, grid and database views
- Upload multiple site maps to suit application/site
- Customisable layout/functions



IP MASTER INTERCOM STATION

IPM-360G | 51534, IPM-360GH | 51535

- Complete intercom call handling functions
- Public address functionality
 - Make live and pre-recorded announcements
 - Selection and playback of recorded announcements
- IEEE 802.3af PoE support
- Backlit display for reliable viewing in dark conditions
- Trigger intercom relays
- Options for gooseneck, handset and headset

**Building safe spaces
with Jacques IP Public
Address Systems**

3



UNIVERSAL AUDIO INTERFACE UAI-3B1/UAI-3E1

PRODUCT CODE 51196, 51195

FEATURES

Multifunctional device

- Interface between Jacques IP Communication System and analogue audio device
- 650 and 550 system interface (hybrid intercom system)
- Public address interface

OPTIONAL ACCOMPANYING PRODUCTS

SVR-100 (used in conjunction with line amplifier)

SPECIFICATIONS

Microphone	200 Hz – 7 kHz (input circuit frequency response ± 3 dB)
Max. Audio Input (Balanced)	+13 dBu (10 V p-p, max. input level)
Max. Audio Output (Balanced)	+13 dBu (10 V p-p, max. output level)
Max. Audio Output (Unbalanced)	+7 dBu (5 V p-p, max. output level)
Audio Streaming Bandwidth	128 kb/s each way
Input Impedance	50 k Ω
Max. Audio Output Load	600 Ω
Auxiliary Functions	Relay contacts (2 x NO/NC)
Power Input	(12 – 32) V d.c., 24 V d.c. nominal, JPoE
Power Consumption	2.4 W max.
Indicators	Power, +5 V, status, RS485 (TX, RX), LAN link and activity
Cabling	Ethernet: 4 pair UTP CAT-5/5e/6, 100 m max. Balanced audio, RS-485 - twisted pairs, CAT-5/5e/6 screen pair cable may be used. Unbalanced audio: screened single core, braided preferable Relays/Power: 0.75 mm ² , multi-strand, 100 m max.
Connectors	LAN/Power: RJ45 Power: 2 way 3.81 mm combicon screw terminal block Audio out/in: RS-485, 8 way 3.81 mm combicon screw terminal block Relays: 6 way 3.81 mm combicon screw terminal block
Operating Temperature	(0 - 70)°C
Operating Humidity	(10 - 90) % relative humidity (non-condensing)
Compliance	EMC: EN55022 Class A
Form Factor	Rectangular box (UAI-3B1) 3U Eurocard, 12 HP, 160 mm (UAI-3E1)
Dimensions (WxHxD)	103 mm x 30.5 mm 168 mm (UAI-3B1) 30.5 mm x 129 mm 179 mm (UAI-3E1)
Weight	0.35 kg (UAI-3B1) 0.15 kg (UAI-3E1)
Material	Extruded aluminium (UAI-3B1) Aluminium plate & handle on card front (UAI-3E1)
Finishes	Anodised, black (UAI-3B1) Powder coated, magnolia gloss (UAI-3E1)
Environment	Indoor use only
Mounting Options	Mounting bracket, 120 mm spacing for 2 screws



PA SPEAKER SVR-100 5/15 W / 15 W LP

PRODUCT CODE 50909, 50007, 51706

FEATURES

- 100 V line vandal resistant speaker
- Marine grade 316 stainless steel face plate
- Quality audio output

OPTIONAL ACCOMPANYING PRODUCTS

- Universal Audio Interface (UAI-3B1)

SPECIFICATIONS

Speaker	1 x 8 Ω, 8 W RMS, 4" dual cone
Frequency Response	100 Hz – 15 kHz (±6 dB)
Sensitivity	90 db SPL, 1 kHz, 1 W, 1 m
100 V Line Power Taps	(0.33, 0.66, 1.25, 2.5, 5) W (SVR-100 5 W) (1.25, 2.5, 5, 10, 15) W (SVR-100 15 W / 15 W LP)
Operating Temperature	(-20 - 55) °C
Operating Humidity	(10 - 95) % relative humidity (non-condensing)
Cabling	Figure 8, 0.75 mm² multi-strand (typical)
Connectors	4 way screw terminal block (SVR-100 5 W) 2 way screw terminal block (SVR-100 15 W / 15 W LP)
Compliance	AS1670.4 EWIS standard (SVR-100/5W)
Form Factor	Circular flush wall panel or surface mount with CSH-1
Dimensions (Ø x D)	170 mm x 65 mm (SVR-100 5 W) 170 mm x 125 mm (SVR-100 15 W) 170 mm x 67 mm (SVR-100 15 W LP)
Weight	1.2 kg (SVR-100 5 W) 1.3 kg (SVR-100 15 W / 15 W LP)
Material	316 stainless steel
Finishes	Linish, chamfered edge
Environment	Non rain exposed area
Vandal Resistant	Yes
Mounting Options	Flush mount direct into ceiling or wall, surface mount backbox (CSH-1)



SURFACE MOUNT BACK BOX CSH-1

PRODUCT CODE 50620

SPECIFICATIONS

Suitable For	SVR-100 series
Dimensions (Ø x D)	231 mm x 71 mm
Weight	1.2 kg
Material	304 stainless steel
Finishes	Powder coated, gloss, black
Environment	Non rain exposed area
Vandal Resistant	Yes
Speaker Mounting Holes	4 x M4 threaded holes
Speaker Fixings	4 x M4 security torx screws
Cable Entry	2 x 25 mm hole rear



SYSTEM SPECIFICATIONS

SYSTEM CAPACITY

Intercom Stations	Unlimited*
Master Stations	Unlimited*
Stored Announcements	Unlimited*
Call Queue Size	Unlimited*
Groups	Unlimited*
Simultaneous Conversations	Unlimited*
Audio Communication Between any endpoint	Yes +
Auxiliary Channels	16 (typically up to 4 live captured sources)

AUDIO CHARACTERISTICS

Frequency Response	200 Hz - 7 kHz \pm 3 dB
Transmission Format	Real-Time Transport Protocol (RTP) Streaming
Digital Audio Format - Voice	A-law compressed PCM 16 kHz sampling rate
Audio Streaming Bandwidth	128 kb/s one way, 256 kb/s full duplex
Acoustic Echo Cancellation	Yes

VIDEO CHARACTERISTICS

Multi-Standard Video Codec	MPEG-4 part 2, simple profile; H.264 baseline profile; H.263 part 3
Video Streaming Bandwidth	500 kb/s - 6 Mb/s

CALL HANDLING

Call Topologies	Intercom/hierarchical/peer/public address/zoned
Call Priorities	256 priority levels
Call Features (Basic)	Auto-answer, hold, forward, diversion, directory, group call, caller-ID, bridged call appearance
Call Features (Specialised)	Isolate nuisance callers, covert monitor, dynamic group call, stored announcements, master call, remote mode, priority queuing, selective answer of call waiting

NETWORK

Addressing	TCP/IP IPV4, static or dynamic (DHCP)
Interface Media	IEEE 802.3 10/100 Mb/s Ethernet
Standards	IEEE802.1P LAN Layer 2 prioritisation IEEE802.1Q Virtual LAN RTP - Real-Time Transport Protocol (RFC3550/3551) TOS - IPV4 Type of Service (RFC791) DTMF - RTP payload for DTMF digits (RFC2833) Multicast - IP Multicasting (RFC1112) Diffserv - Differentiated Services (RFC2474/2475) NTP - Network Time Protocol (RFC1305) IGMPv2 - Internet Group Management Protocol v2 (RFC2236) DHCP - Dynamic Host Configuration Protocol (RFC1531)

CABLING

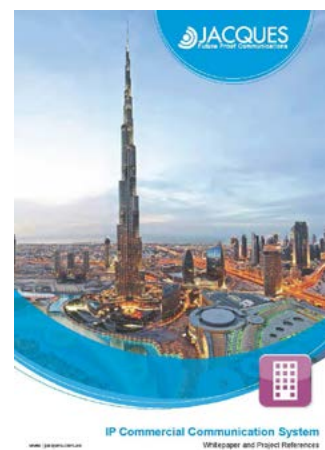
Power Input/Ethernet	4 pair UTP CAT-5/5e/6, multi-strand, 24 AWG - max. 100m
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*Dependent on server configuration and network bandwidth

+Dependent on system configuration and permissions granted



ADDITIONAL RESOURCES



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